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830.6315 Flammability

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830.7000 pH

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830.7050 UV/Visible absorption

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830.7100 **Viscosity**

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830.7200

Melting point/melting range

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Density/relative density

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830.7370 Dissociation constants in water

MRID	Citation Reference
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830.7550 Partition coefficient (n-octanol/water), shake flask method

MRID	Citation Reference
47112202	Stoehr, C. (2007) Determination of the Physical and Chemical Characteristics and Preliminary Analysis of Technical 2,4-Dichlorophenoxy Acetic Acid (2,4-D). Project Number: 486G182, 486G182A. Unpublished study prepared by EPL Bio-Analytical Services. 294 p.
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830.7560 Partition coefficient (n-octanol/water), generator column method

MRID	Citation Reference
48463014	Ehresman, N. (2011) Waiver Request for Certain Data Requirements for Nufarm Technical 2,4-D Acid (NUP-11023). Unpublished study prepared by Nufarm Limited. 7 p.
49391508	Ehresman, N. (2014) Waiver Request for Certain Data Requirements for Nufarm 2,4-D Technical Acid (NUP-14030). Project Number: 2014/2A. Unpublished study prepared by Nufarm Limited. 7p.

830.7570 Partition coefficient (n-octanol/water), estimation by liquid chromatography

MRID	Citation Reference
48463004	Li, H. (2010) Chemical and Physical Characterization of 2,4-D TGA1: Color, Physical State, Odor, Stability, Oxidation/Reduction, pH, UV-Vis, Melting Point, Density, Dissociation Constant, Partition Coefficient and Water Solubility: Final Report. Project Number: NC/2009/029. Unpublished study prepared by Nutrichem Laboratory Co., Ltd. 76 p.
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830.7840 Water solubility: Column elution method, shake flask method

MRID	Citation Reference
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830.7860 Water solubility, generator column method

MRID	Citation Reference
48463014	Ehresman, N. (2011) Waiver Request for Certain Data Requirements for Nufarm Technical 2,4-D Acid (NUP-11023). Unpublished study prepared by Nufarm Limited. 7 p.
49391508	Ehresman, N. (2014) Waiver Request for Certain Data Requirements for Nufarm 2,4-D Technical Acid (NUP-14030). Project Number: 2014/2A. Unpublished study prepared by Nufarm Limited. 7p.

830.7950 Vapor pressure

MRID	Citation Reference
47319702	Miller, R. (2007) Product Properties: Color, Physical State, Odor, Oxidation/Reduction: Chemical Incompatibility, pH, and Density. Project Number: CHB/EX/429/004/P/1. Unpublished study prepared by Phibro-Tech, Inc. 19 p.

850.2100 Avian acute oral toxicity test

MRID	Citation Reference
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850.2200 Avian dietary toxicity test

MRID	Citation Reference
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850.3020 Honey bee acute contact toxicity

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850.6100 Environmental Chemistry Methods and Associated Independent Laboratory Validation

MRID	Citation Reference
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860.1300 Nature of the residue - plants, livestock

MRID	Citation Reference
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860.1340 Residue analytical method

MRID	Citation Reference
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860.1380 Storage stability data

MRID	Citation Reference
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860.1500 Crop field trials

MRID	Citation Reference
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860.1520 Processed food/feed

MRID	Citation Reference
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870.1000 Acute toxicity testing--background

MRID	Citation Reference
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870.1100 Acute oral toxicity

MRID	Citation Reference
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46838904	Durando, J. (2006) Acute Oral Toxicity Up and Down Procedure in Rats: BWIII. Project Number: 18663, P320/UDP. Unpublished study prepared by Product Safety Laboratories. 16 p.
46989402	Moore, G. (2005) HM-0339-A: Acute Oral Toxicity Up and Down Procedure in Rats. Project Number: 17545, P320/UDP. Unpublished study prepared by Product Safety Laboratories. 15 p.
47354301	Durando, J. (2007) Acute Oral Toxicity Up and Down Procedure in Rats: S-13221. Project Number: 22772, P320/UDP, 070813/12R. Unpublished study prepared by Product Safety Laboratories. 14 p.
47381701	Durando, J. (2008) Acute Oral Toxicity Up and Down Procedure in Rats: S-13321. Project Number: 23344, P320/UDP, 071017/9R. Unpublished study prepared by Product Safety Laboratories. 14 p.
47464802	Durando, J. (2008) Acute Oral Toxicity Up and Down Procedure in Rats: NUP-08040. Project Number: P320/UDP, 24612, 080321/5R. Unpublished study prepared by Product Safety Laboratories. 18 p.
47584903	Durando, J. (2008) HM-0801: Acute Oral Toxicity Up and Down Procedure in Rats. Project Number: P320/UDP, 24989. Unpublished study prepared by Product Safety Laboratories. 16 p.
47589204	Durando, J. (2007) Weedone 638 (NUP-07248): Acute Oral Toxicity Up and Down Procedure in Rats. Project Number: 22842, P320/UDP. Unpublished study prepared by Product Safety Laboratories. 17 p.
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47653603 Durando, J. (2008) Acute Oral Toxicity Up and Down Procedure in Rats: EH-1470 Weed and Feed. Project Number: 26357. Unpublished study prepared by Eurofins-Product Safety Laboratories. 27 p.

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870.1200 **Acute dermal toxicity**

MRID	Citation Reference
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46838905	Durando, J. (2006) Acute Dermal Toxicity Study in Rats - Limit Test: BWIII. Project Number: 18664, P322. Unpublished study prepared by Product Safety Laboratories. 15 p.
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47354302	Durando, J. (2007) Acute Dermal Toxicity Study in Rats-Limit Test: S-13221. Project Number: 22772, P322/RAT, 070813/12R. Unpublished study prepared by Product Safety Laboratories. 14 p.
47381702	Durando, J. (2008) Acute Dermal Toxicity Study in Rats - Limit Test: S-13321. Project Number: 23345, P322/RAT, 071017/9R. Unpublished study prepared by Product Safety Laboratories. 14 p.
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47584904	Durando, J. (2008) HM-0801: Acute Dermal Toxicity Study in Rats - Limit Test. Project Number: 24990, P322/RAT. Unpublished study prepared by Product Safety Laboratories. 15 p.
47589205	Durando, J. (2007) Weedone 638 (NUP-07248): Acute Dermal Toxicity Study in Rats - Limit Test. Project Number: 22843, P322/RAT. Unpublished study prepared by Product Safety Laboratories. 16 p.
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48336104	Durando, J. (2010) NUP-09136: Acute Dermal Toxicity Study in Rats. Project Number: 30620, P322/RAT. Unpublished

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48363804 Durando, J. (2011) NUP-09141: Acute Dermal Toxicity Study in Rats. Project Number: 30785, P322/RAT. Unpublished study prepared by Eurofins/Product Safety Laboratories. 22 p.

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870.1300 **Acute inhalation toxicity**

MRID	Citation Reference
46531905	Merkel, D. (2005) Acute Inhalation Toxicity Study in Rats - Limit Test: EH-1425. Project Number: 16654, P330. Unpublished study prepared by Product Safety Laboratories. 34 p.
46838906	Durando, J. (2006) Acute Inhalation Toxicity Study in Rats - LC50: BWIII. Project Number: 18665, P330. Unpublished study prepared by Product Safety Laboratories. 31 p.
46989403	Moore, G. (2005) HM-0339-A: Acute Inhalation Toxicity Study in Rats. Project Number: 17547, P330. Unpublished study prepared by Product Safety Laboratories. 29 p.
47381703	Durando, J. (2008) Acute Inhalation Toxicity Study in Rats - Limit Test: S-13321. Project Number: 23346, P330, 071017/9R. Unpublished study prepared by Product Safety Laboratories. 22 p.
47391901	Durando, J. (2007) Acute Inhalation Feasibility Study: S-13221. Project Number: 22774, P330, 070813/12R. Unpublished study prepared by Product Safety Laboratories. 11 p.
47452701	Ma-Hock, L.; Landsiedel, R. (2008) BAS 452 18 H: Acute Inhalation Toxicity Study in Wistar Rats 4-Hour Liquid Aerosol Exposure. Project Number: 13I0079/087004, 2008/1031423. Unpublished study prepared by BASF SE, Experimental Toxicology and Ecology. 44 p.
47464804	Durando, J. (2008) Acute Inhalation Toxicity Study in Rats-Limit Test: NUP-08040. Project Number: P330, 24614, 080321/5R. Unpublished study prepared by Product Safety Laboratories. 25 p.
47584905	Durando, J. (2008) HM-0801: Acute Inhalation Toxicity Study in Rats. Project Number: P330, 24991. Unpublished study prepared by Product Safety Laboratories. 33 p.
47589206	Durando, J. (2007) Weedone 638 (NUP-07248): Acute Inhalation Toxicity Study in Rats - Limit Test. Project Number: 22844, P330. Unpublished study prepared by Product Safety Laboratories. 24 p.
47597305	Lowe, C. (2008) Weedone 638 Solventless Broadleaf Herbicide: Acute Inhalation Toxicity Study in Rats - Limit Test. Project Number: 23249, P330. Unpublished study prepared by Product Safety Laboratories. 24 p.
47653605	Durando, J. (2008) Acute Inhalation Toxicity Study in Rats: EH-1470 Weed and Feed. Project Number: 26359. Unpublished study prepared by Eurofins-Product Safety Laboratories. 35 p.
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48336105	Durando, J. (2010) NUP-09136: Acute Inhalation Toxicity Study in Rats. Project Number: 30621, P330. Unpublished study

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48363805 Durando, J. (2011) NUP-09141: Acute Inhalation Toxicity Study in Rats. Project Number: 30786, P330. Unpublished study prepared by Eurofins/Product Safety Laboratories. 25 p.

48373805 Doig, A. (2010) AGH09008 (38.4% 2,4-D Acid): Acute Inhalation Toxicity Study in Rats: Final Report. Project Number: 14180/10. Unpublished study prepared by Stillmeadow, Inc. 20 p.

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49456305 Lowe, C. (2014) NUP-14008: Acute Inhalation Toxicity in Rats. Project Number: 39116, P330, 140630/5H. Unpublished study prepared by Product Safety Laboratories. 29p.

870.2400 **Acute eye irritation**

MRID	Citation Reference
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46531909	Merkel, D. (2005) Primary Eye Irritation Study in Rabbits: EH-1427. Project Number: 16847, P324. Unpublished study prepared by Product Safety Laboratories. 27 p.
46838907	Durando, J. (2006) Primary Eye Irritation Study in Rabbits: BWIII. Project Number: 18666, P324. Unpublished study prepared by Product Safety Laboratories. 18 p.
46989404	Moore, G. (2005) HM-0339-A: Primary Eye Irritation Study in Rabbits. Project Number: 17548, P324. Unpublished study prepared by Product Safety Laboratories. 17 p.
47354303	Durando, J. (2007) Primary Eye Irritation Study in Rabbits: S-13221. Project Number: 22775, P324, 070812/12R. Unpublished study prepared by Product Safety Laboratories. 17 p.
47367101	Durando, J. (2007) Primary Eye Irritation Study in Rabbits: S-13220. Project Number: P324, 22788, 070816/4R. Unpublished study prepared by Product Safety Laboratories. 15 p.
47381704	Durando, J. (2008) Primary Eye Irritation Study in Rabbits: S-13321. Project Number: 23347, P324, 071017/9R. Unpublished study prepared by Product Safety Laboratories. 17 p.
47406701	Durando, J. (2007) Primary Eye Irritation Study in Rabbits: S-13222. Project Number: 22770, S-13222. Unpublished study prepared by Eurofins-Product Safety Laboratories. 17 p.
47464805	Durando, J. (2008) Primary Eye Irritation Study in Rabbits: NUP-08040. Project Number: P324, 24615, 080321/5R. Unpublished study prepared by Product Safety Laboratories. 18 p.
47472001	Moore, G. (2008) Primary Eye Irritation Study in Rabbits: 46-0-0 Milled and Treated Fertilizer. Project Number: 25434, 080360, P324/DOW. Unpublished study prepared by Product Safety Laboratories. 33 p.
47584906	Durando, J. (2008) HM-0801: Primary Eye Irritation Study in Rabbits. Project Number: 24992, P324. Unpublished study prepared by Product Safety Laboratories. 18 p.
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870.2500 Acute dermal irritation

MRID	Citation Reference
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870.2600 Skin sensitization

MRID	Citation Reference
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870.3465 90-day inhalation toxicity

MRID	Citation Reference
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870.3800 Reproduction and fertility effects

MRID	Citation Reference
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47972101	Marty, M.; Zabltny, C.; Andrus, A.; et al. (2010) 2,4-D: An F1-Extended One Generation Dietary Toxicity Study in CRL:CD(SD) Rats. Project Number: 081104. Unpublished study prepared by The Dow Chemical Co. 2101 p.

870.6300 Developmental neurotoxicity study

MRID	Citation Reference
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870.7800

Immunotoxicity

MRID	Citation Reference
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875.1100

Dermal exposure--outdoor

MRID	Citation Reference
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875.1300

Inhalation exposure--outdoor

MRID	Citation Reference
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49462405	Perez, R.; Miska, J. (2014) Determination of the Freezer Storage Stability of Imazapyr in/on Worker Exposure Matrices. Project Number: AHE217, 2K11/ADPEN/001/AHE217. Unpublished study prepared by ADPEN Laboratories, Inc. 87p.
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875.2400 Dermal exposure

MRID	Citation Reference
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875.2500 Inhalation exposure

MRID	Citation Reference
49472001	Bruce, E. (2014) Determination of Dermal and Inhalation Exposure to Workers during Backpack and Handgun Application of Liquid Sprays in Utilities Rights-of-Way. Project Number: AHE400. Unpublished study prepared by Agricultural Handler Exposure Task Force. 1430p.

890.1350 Fish Short-Term Reproduction

MRID	Citation Reference
48317001	Marino, T.; Coady, K.; Sosinski, L.; et al. (2010) 2,4-Dichlorophenoxyacetic Acid: A Fish Short-Term Reproduction Assay Using the Fathead Minnow, <i>Pimephales promelas</i> . Project Number: 101026. Unpublished study prepared by Dow Chemical, USA. 155 p. Relates to L0001319.

890.1100 Amphibian Metamorphosis (Frog)

MRID	Citation Reference
48317002	Coady, K.; Marino, T.; Thomas, J. (2010) 2,4-Dichlorophenoxyacetic Acid: The Amphibian Metamorphosis Assay Using the South African Clawed Frog, <i>Xenopus laevis</i> . Project Number: 101025. Unpublished study prepared by Dow Chemical, USA. 152 p.

890.1150 Androgen Receptor Binding (Rat Prostate)

MRID	Citation Reference
48614301	Schisler, M.; LeBaron, M.; Visconti, N. (2011) (Endocrine Disruptor Screening Program): Evaluation of 2,4-dichlorophenoxyacetic Acid (2,4-D) in an in vitro Androgen Receptor Binding Assay. Project Number: 111111/OCR. Unpublished study prepared by Exponent and The Dow Chemical Co. 91p.

890.1200 Aromatatase (Human Recombinant)

MRID	Citation Reference
48614301	Schisler, M.; LeBaron, M.; Visconti, N. (2011) (Endocrine Disruptor Screening Program): Evaluation of 2,4-

dichlorophenoxyacetic Acid (2,4-D) in an in vitro Androgen Receptor Binding Assay. Project Number: 111111/OCR.
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890.1250 Estrogen Receptor Binding

MRID	Citation Reference
48614301	Schisler, M.; LeBaron, M.; Visconti, N. (2011) (Endocrine Disruptor Screening Program): Evaluation of 2,4-dichlorophenoxyacetic Acid (2,4-D) in an in vitro Androgen Receptor Binding Assay. Project Number: 111111/OCR. Unpublished study prepared by Exponent and The Dow Chemical Co. 91p.

890.1300 Estrogen Receptor Transcriptional Activation (Human Cell Line HeLa-9903)

MRID	Citation Reference
48614301	Schisler, M.; LeBaron, M.; Visconti, N. (2011) (Endocrine Disruptor Screening Program): Evaluation of 2,4-dichlorophenoxyacetic Acid (2,4-D) in an in vitro Androgen Receptor Binding Assay. Project Number: 111111/OCR. Unpublished study prepared by Exponent and The Dow Chemical Co. 91p.

890.1400 Hershberger (Rat)

MRID	Citation Reference
48614301	Schisler, M.; LeBaron, M.; Visconti, N. (2011) (Endocrine Disruptor Screening Program): Evaluation of 2,4-dichlorophenoxyacetic Acid (2,4-D) in an in vitro Androgen Receptor Binding Assay. Project Number: 111111/OCR. Unpublished study prepared by Exponent and The Dow Chemical Co. 91p.

890.1450 Female Pubertal (Rat)

MRID	Citation Reference
48614301	Schisler, M.; LeBaron, M.; Visconti, N. (2011) (Endocrine Disruptor Screening Program): Evaluation of 2,4-dichlorophenoxyacetic Acid (2,4-D) in an in vitro Androgen Receptor Binding Assay. Project Number: 111111/OCR. Unpublished study prepared by Exponent and The Dow Chemical Co. 91p.

890.1500 Male Pubertal (Rat)

MRID	Citation Reference
48614301	Schisler, M.; LeBaron, M.; Visconti, N. (2011) (Endocrine Disruptor Screening Program): Evaluation of 2,4-dichlorophenoxyacetic Acid (2,4-D) in an in vitro Androgen Receptor Binding Assay. Project Number: 111111/OCR. Unpublished study prepared by Exponent and The Dow Chemical Co. 91p.

890.1600 Uterotrophic (Rat)

MRID	Citation Reference
48614301	Schisler, M.; LeBaron, M.; Visconti, N. (2011) (Endocrine Disruptor Screening Program): Evaluation of 2,4-dichlorophenoxyacetic Acid (2,4-D) in an in vitro Androgen Receptor Binding Assay. Project Number: 111111/OCR. Unpublished study prepared by Exponent and The Dow Chemical Co. 91p.

890.1200 **Aromatase (Human Recombinant)**

MRID	Citation Reference
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890.1250 **Estrogen Receptor Binding**

MRID	Citation Reference
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890.1550 **Steroidogenesis (Human Cell Line- H295R)**

MRID	Citation Reference
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MRID	Citation Reference
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